

**EXTRA PRACTICE 17**  
**Addition and Subtraction of Polynomials**  
**Use after Section 4.4**

Name \_\_\_\_\_

Examples:

$$\begin{aligned}\text{Add. } (2x^2 - 3x + 4) + (8x^2 - 7x - 6) &= 2x^2 - 3x + 4 + 8x^2 - 7x - 6 \\ &= (2 + 8)x^2 + (-3 - 7)x + (4 - 6) \\ &= 10x^2 - 10x - 2\end{aligned}$$

$$\begin{array}{r}\text{Add. } 3x^2 + 3x - 7 \\ 4x^2 - 2x + 8 \\ 7x^2 + x + 1\end{array}$$

Add.

$$1. \quad (2x - 3) + (4x - 2) = \underline{\hspace{2cm}} \qquad 2. \quad (3x + 7) + (5x - 4) = \underline{\hspace{2cm}}$$

$$3. \quad (6x^2 + 2) + (3x^2 - 4x + 5) = \underline{\hspace{2cm}} \qquad 4. \quad (2x - 3) + (5x^2 - 4x + 2) = \underline{\hspace{2cm}}$$

$$5. \quad (4x^2 + 2x) + (5x^2 - 3x) = \underline{\hspace{2cm}} \qquad 6. \quad (7x^2 - 3x + 2) + (3x - 2x^2 + 8) = \underline{\hspace{2cm}}$$

$$7. \quad (4x^5 - 3x^3 + 2x^2 - 1) + (5x^4 - 7x^3 + 3x + 1) = \underline{\hspace{2cm}}$$

$$8. \quad (1 + 2x^2 - 3x^3 + 5x^4) + (3x^2 - 3x^3 + 7x^4 - 2x) = \underline{\hspace{2cm}}$$

$$\begin{array}{r}9. \quad 4x^2 + 7x - 8 \\ 3x^2 + 2x + 3 \\ x^2 \qquad + 5\end{array}$$

$$\begin{array}{r}10. \quad 7x^2 - 8x + 7 \\ 7x \qquad + 5 \\ -2x^2 + 3x\end{array}$$

**EXTRA PRACTICE 17 (continued)**  
**Addition and Subtraction of Polynomials**  
**Use after Section 4.4**

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Examples:

Subtract.  $(5x^2 - 7x + 2) - (3x^2 - 2x + 3) = 5x^2 - 7x + 2 - 3x^2 + 2x - 3$   
 $= 2x^2 - 5x - 1$

Subtract. 
$$\begin{array}{r} 4x^4 - 3x^2 + 5x - 1 \\ 2x^4 \qquad + 4x - 8 \\ \hline 2x^4 - 3x^2 + x + 7 \end{array}$$

Subtract.

11.  $(4x + 3) - (7x - 5) =$  \_\_\_\_\_ 12.  $(-3x - 5) - (-7x - 4) =$  \_\_\_\_\_

13.  $(5x^2 - 3x + 2) - (2x^2 + 7x + 5) =$  \_\_\_\_\_  
 14.  $(5x^3 - 3x + 1) - (-2x^3 + x^2 - 4) =$  \_\_\_\_\_

15.  $(1 - 2x + 5x^2) - (2 - 6x + 2x^2) =$  \_\_\_\_\_  
 16.  $(5 - 3x^2) - (4x^2 - 2x + 7) =$  \_\_\_\_\_

17.  $(4x^3 - 7x^2 + 2x - 1) - (8x^3 - 3x^2 + 5x - 2) =$  \_\_\_\_\_

18.  $(8x^5 - 4x + 5) - (3x^4 + 2x - 7) =$  \_\_\_\_\_

19. 
$$\begin{array}{r} 5x^2 - 3x + 2 \\ 4x^2 + 7x - 5 \\ \hline \end{array}$$
 20. 
$$\begin{array}{r} 8x^3 \qquad + 2x - 3 \\ \underline{4x^3 - 2x^2 \qquad + 8} \end{array}$$